

REMARKS

Upon entry of the amendment, claims 1, 3-18, and 20-43 are pending in the application. Claims 21-36 and 38-42 are withdrawn from consideration. Claim 2 has been cancelled.

Claim 1 is amended to recite that the adhesive comprises (i) a resin, and (ii) a curing agent comprising at least one primary amine, diamine, polyamine, or a mixture of two or more thereof. Support for this amendment may be found in the specification at, for example, page 18, lines 4-15 and page 19, lines 7-24. Claim 1 is also amended to recite that the adhesive is curable without application of an external energy source. Support for this may be found in the specification at page 13, lines 18-20. Claims 17 and 37 are amended to indicate that the adhesive may comprise various resins and a primary amine curing agent. Claim 18 is amended to recite that the adhesive comprises at least one amine terminated polyamide. Support for this amendment may be found at page 18, lines 20-29 and Examples 1-6 and 8.

Claim Rejections based on U.S. Patent 5,863,624

The Examiner rejected claims 1, 2, 6-9, 11, 12, 17, 18, 20, and 37 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent 5,863,624 (Miyazaki et al.) as evidenced by U.S. Patent 6,288,486 (Kittel et al.) and Handbook of Adhesives and Sealants by Petrie, E. M. (page 360). The Examiner stated that the epoxy resin and hardener of Miyazaki read on the adhesive layer derived from at least one two-part curable adhesive as claimed in claim 1. The Examiner acknowledged that Miyazaki does not teach a high solids adhesive, but stated that it is reasonable to presume that Miyazaki's thermosetting adhesive contains high solids because Miyazaki allegedly discloses a like material to that in the claims. The Examiner also stated that the limitation "without application of an external energy source" as originally recited in claim 2 should not be given patentable weight because it is considered a process limitation and not a structural part of the article claims. The Examiner

further stated that Miyazaki does not teach corona treating the upper surface of the polymer facestock and relies on Kittel et al. for teaching such a feature. Additionally, the Examiner stated that, with respect to claim 9, Miyazaki does not teach including a reactive diluent in a two-part curable adhesive and relied on Petrie for such a teaching.

Applicant respectfully disagrees with the Examiner's contentions. A reference fails to anticipate a claim unless the reference teaches each and every element in the claim. (M.P.E.P. 2131.) Miyazaki is directed to an adhesive that employs a trimellitic acid anhydride hardener. As currently amended, claim 1 recites that the adhesive comprises a curing agent comprising at least one primary amine, diamine, polyamine or a mixture of two or more thereof. As currently amended, claim 37 recites that an adhesive may comprise one or more of various resins with a primary amine. Miyazaki fails to teach or suggest an adhesive comprising a curing agent comprising at least one primary amine, diamine, polyamine, or mixtures of two or more thereof. For at least this reason, Miyazaki fails to teach every feature set forth in independent claims 1 and 37 and fails to anticipate the claims.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference, or references when combined, must teach or suggest all the claim limitations. (M.P.E.P. 2143.) The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. (Id.) The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a

convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references. (M.P.E. P. 706.02(j).)

As discussed above, Miyazaki fails to teach or suggest all the features recited in independent claims 1 and 37. Specifically, Miyazaki teaches a thermosetting resin adhesive formed of an epoxy resin and a trimellitic acid anhydride hardener. To obtain strong adhesion of the polyester film of Miyazaki to the metal sheet, the metal sheet and polyester film are placed in an oven to cure the thermosetting resin adhesive. (See Col. 13, lines 45-51.) That is, Miyazaki fails to teach an adhesive that (i) comprises at least one primary amine, diamine, polyamine, or mixtures of two or more thereof, and/or (ii) is curable without the application of an external energy source. Consequently, claims 1 and 37 are not obvious in view of Miyazaki.

Additionally, any claims depending from a non-obvious independent claim are also non-obvious. (M.P.E.P. 2143.03.) Consequently, claims 6-9, 11, 12, 17, and 18 which depend (directly or indirectly) from claim 1, are not obvious in view of Miyazaki.

The Examiner rejected claims 9 and 20 as being obvious based on Miyazaki in combination with secondary references Kittel and Petrie, respectively. As previously discussed, Miyazaki fails to teach, either explicitly or implicitly, a curing agent comprising at least one primary amine, diamine, polyamine, or mixtures of two or more thereof curatives as recited in amended claim 1 or primary amine as recited in claim 37. The Kittel and Petrie references do not make up for Miyazaki's deficiencies. Kittel et al. is directed to a thermal transfer laminate that uses heat and pressure to adhere the laminate to a substrate via a heat-activateable adhesive layer. The Examiner only relies on Petrie for teaching the use of reactive diluents to epoxy based adhesives. Further, claims 9 and 20 directly or indirectly depend from claim 1, which (as discussed above) is not obvious in view of Miyazaki. Therefore, claims 9 and 20

are also not obvious in view of Miyazaki, alone or in combination with the cited references.

Claim 1 is also amended to recite that the adhesive is curable without application of an external energy source. Claim 2 originally included the limitation that the adhesive "cures without application of an external energy source". The Examiner suggested that such language should not be given patentable weight because it is considered a process limitation and not a structural part of the claims. Applicant submits that the phrase "is curable without application of an external energy source" as recited in claim 1 reflects a property of the adhesive polymer that should be given patentable weight.

Applicant respectfully requests that the Examiner withdraw the rejection of claims 1, 2, 6-9, 11, 12, 17, 18, 20, and 37 under § 102(b), or in the alternative, under § 103(a) based on Miyazaki alone or in combination with Kittel or Petrie.

Claim Rejections based on U.S. Patent 3,723,223 (Le Compte)

The Examiner rejected claims 1, 4, 5, 18, 19, and 43 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Le Compte. The Examiner contended that Le Compte teaches an adhesive prepared by applying to a carrier a blend of solid epoxy resin and solid curing agent. The Examiner stated that with respect to claims 1, 18, 19 and 43, Le Compte discloses an adhesive such as a tetrafunctional polyglycidyl ether of teraphenylene. The Examiner also stated that Le Compte inherently discloses (1) an adhesive having an initial tack sufficient to remain in a position when applied to a substrate as recited in claim 4, and (2) a viscosity range of from about 30,000 cps to about 120,000 cps in claim 5.

Applicant respectively disagrees with the Examiner's contention. Le Compte is directed to a one-component, heat curing adhesive, having a long shelf life. ('223 patent, Col 1, lines 1-4.) Le Compte discloses a carrier that is coated with a composition comprising a thermoplastic binder, discrete particles of epoxy resin, discrete particles of a heat-reactive epoxy reactive hardener, and a

dispersing medium. ('223 patent, Col. 1, lines 31-36.) The binder is employed to reduce contact between the epoxy and the hardener particles and prevent them from reacting until heat curing during lamination. ('223 patent, Col. 2, lines 32-36.) Additionally, Le Compte's composition utilizes a dispersing medium (water or solvent) to decrease the concentration of reactive particles and cause the binder to surround each particle and keep it from contacting other reactive particles. (Col. 2, lines 46-63.) The coated carriers may be stored for long periods of time at room temperature ('223 patent, col. 4, lines 15-17.) The coated carriers are used for lamination and not as labels. Laminates are formed by hot pressing a substrate to the coated carrier, such as by inserting a coated carrier and substrate in a press at about 200°F to about 400°F at a pressure of from about 10 pounds per square inch to about 1,000 pounds per square inch. (Column 4, lines 18-34.) Le Compte discloses that the laminates are useful as furniture material, counter tops, wall coverings, floor coverings, building panels, and the like. (Column 4, lines 50-54.)

Le Compte fails to teach or suggest a label comprising an adhesive that comprises a two-part high solids adhesive curing agent comprising a curing agent as recited in amended claim 1. First, Le Compte fails to teach a two-part curable adhesive. As discussed above, Le Compte explicitly states its material is a one-component adhesive that employs a binder and dispersing agent to prevent the resin and hardener from reacting. Second, the use of a dispersing agent suggests that the composition is not high solids. Third, Le Compte does not teach a composition curable without application of an enforced energy source. Rather, Le Compte requires heating to form a laminate with its composition. Therefore, Le Compte fails to teach or suggest every element set forth in the claims. Consequently, claim 1 and claims 4, 5, 18, 19 and 43, which depend from claim 1, are not anticipated by or obvious in view of Le Compte.

The Examiner rejected claim 3 under 35 U.S.C. § 103(a) as being unpatentable over Le Compte in view of U.S. Patent 4,521,490 (Pocius et al.). The Examiner relies on Pocius for teaching tackifiers and plasticizers and

contends that it would be obvious to add plasticizers of Pocius to the epoxy based adhesives of Le Compte.

Applicant disagrees with the Examiner's contention. The Examiner only relies on Pocius for teaching a solventless epoxy adhesive and adding a plastizer to improve the adhesives characteristics. As discussed above, Le Compte's one-component heat curing adhesive fails to teach or suggest the adhesive set forth in claim 1. Merely adding a plasticizer from Pocius does not cure the defects in Le Compte. Consequently, claim 3, which depends from claim 1, is not obvious in view of Le Compte in combination with Pocius.

Applicant respectfully request that the Examiner withdraw the rejection of claims 1, 3, 4, 5, 18, 19 and 43 under §102(b) or, in the alternative, under §103(a) based on Le Compte alone or in combination with Pocius.

Claim Rejections based on U.S. Patent 4,883,697 (Dornbusch)

The Examiner rejected claims 1 and 10-16 in view of Dornbusch either alone or in combination with several different references. The Examiner rejected claims 1, 11, and 14 under 35 U.S.C. § 102(b) as anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as obvious over Dornbusch as evidenced by U.S. Patent 3,915,478 (Al et al.). The Examiner rejected claim 10 under 35 U.S.C. § 103(a) as being unpatentable over Dornbusch in view of U.S. Patent 4,654,262 (Alonso). Claims 12 and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Dornbusch in view of U.S. Patent 4,151,319 (Sackoff et al.). Claim 15 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Dornbusch in view of U.S. Patent 5,380,587 (Musclow et al.) and the Examiner rejected claim 16 under 35 U.S.C. § 103(a) as being unpatentable over Dornbusch in view of U.S. Patent 6,153,288 (Shih et al.). The Examiner stated that, with respect to claim 1, Dornbusch does not disclose an adhesive layer derived from high solids adhesive but that it is reasonable to presume that the epoxy-type urethane type adhesive of Dornbusch is high solids because it allegedly is similar to materials set forth in the claims. For claims 10-16, the

Examiner contends that Dornbusch in combination with the respective secondary references renders those claims obvious.

Applicant disagrees with the Examiner's contention. Dornbusch discloses a flexible multilayer label comprising a label stratum (14) laminated to a stress-compensating stratum (30) by a one-component adhesive (20) such as an epoxy-type urethane. A heat-activated sealant is laminated to the stress-compensating stratum (30). ('657 patent, col. 5, lines 2-7.) It is the heat-activated sealant in layer (25) of Dornbusch, not the adhesive (20), that provides the bonding capability to bond the label to a package. Dornbusch discloses that its heat-activated sealant is a wax composition that includes ethylene-vinyl acetate copolymer. Thus, Dornbusch fails to teach or suggest a two-part curable adhesive, let alone one comprising a curing agent comprising at least one primary amine, diamine, polyamine or mixtures of two or more thereof. Consequently, Dornbusch fails to teach or suggest all the elements set forth in the claims and therefore fails to anticipate the claims or render them obvious.

The secondary references cited by the Examiner with respect to claims 10-16 do not make up for Dornbusch's deficiencies. Therefore claim 1 and any claim dependent therefrom is not obvious in view of Dornbusch either alone or in combination with the cited references. Applicant respectfully requests withdrawal of the rejection of claims 1 and 10-16 based on Dornbusch either alone or in view of any of the cited references.

CONCLUSION

In view of the foregoing remarks, Applicant respectfully requests a timely issuance of a Notice of Allowance.

In the event any fees are due in connection with the filing of this document, the Commissioner is authorized to charge those fees to our Deposit Account No. 18-0988 under Attorney Docket No. **AVERP3299USA**.

Respectfully submitted,

RENNER, OTTO, BOISSELLE & SKLAR, LLP

By /Heidi A. Boehlefeld/
Heidi A. Boehlefeld, Reg. No. 34,296

1621 Euclid Avenue
Nineteenth Floor
Cleveland, Ohio 44115
(216) 621-1113